SCIENTIFIC AMERICAN.

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THE SCIENTIFIC AMERICAN

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(The Principal Office being at New York,)

By RUFUS PORTER.

Each number of this paper is furnished with from two to five ORIGINAL ENGRAVINGS, many of them elegant, and illustrative of NEW INVENTIONS, SCIENTIFIC PRINCIPLES, and CURIOSITIES; and contains as much Interesting Intelligence as six ordinary daily papers, consisting o notices of the progress of Mechanical and other Scientific Improvements,—American and Foreign Inventions Catalogues of American Patents,—Scientific Essays, illustrative of the principles of the Sciences of MECHANICS, CHEMISTRY, and ARCHITECTURE;—Instruction in various Arts and Trades;—Curious Philosophical Expements;—Miscellaneous Intelligence, Poetry and, occasionally, Music.

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TERMS OF ADVERTISING.—For 10 lines, or less, 50 cents for the first, and 12 I-2 cents for every subsequent insertion.

"Ins and Outs."

I'm out of cash, and so, of course,
I've pocket room to let;
I'm out of patience, just because
I'm never out of debt.
Besides, I'm dreadfully in love,
And more than half in doubt
Which is the greater evil, that
Of being in or out.

I'm deeply in my tailor's books,
But I don't mind a dun;
And if I wasn't out of funds
I'd pay him out of fun.
He always gave me "fits," he said,
But heaven bless his eyes!
'Twould put *him* in a fit, I guess,
He'd be in such surprise.

I'm out at elbows, in distress,—
Ah! mine's a sorry tale!
I'm out of favor, out of sorts,
But then I'm out of jail,
My landlord says my *time* is out,
And thinks I'd better "skin,"
I'm such an "out-and-outer," he
Won't have me in his inn.

I'm out of office, but in hopes
To get put in some day;
If I don't "run" for something soon
I'll have to run away.
I'm out of spirits; and I'm out
Of more than I can think;
I'm out of temper; hang the pen!
I'm out—I'M OUT OF INK!

The Careful old Lady.

The old lady sat in her rocking chair,
Darn, darn, darn;
The fire was bright and the night was fair,
Darn, darn, darn;
The stocking was old, and the heel was worn,
But she was well furnished with needle and yarn,
And well she knew how the heel to turn,
And darn, darn, darn.

She had sat in her chair from morn till night,
Darn, darn, darn;
And still her eye was watchful and bright,
Darn, darn, darn;
For well she was used her needle to ply;
And every hole in a stocking could spy,
And to mend it faithfully, she would try;
Darn, darn, darn.

Young ladies, if ever you hope to be wives,
Darn, darn, darn;
For many a call you will have in your lives
To darn, darn, darn.
Would you keep your children neat and clean?
Would you save their toes from frost-bites keen?
Then never believe that darnings are mean,
But darn, darn, darn.

Our devil (says an exchange paper,) having fallen a victim to the "tender passion," thus pathetically laments the absence of his "true love."

I think of thee, oh Sally dear,
Ven I'm setting up the types,
And ven I thinks you're far away,
From my eye a tear I vipes.

Oh, Sally, dear! vot shall I do?
I'm sick of this here life,
If you're not back here werry soon,
In my heart I'll stick a knife!

INTERESTING INCIDENT.—Thomas P. Hunt and John Hawkins met lately for the first time at a public meeting in Faneuil Hall. As Mr. Hunt took the stand, Hawkins stepped out and said: "Mr. President,—I have a pledge to fulfil at this moment. Some fifteen years ago, while in a state of intoxication in the city of Philadelphia, rambling about, I heard the voice of a man speaking in the open air, with a crowd around him. I pressed through the crowd, and found he was talking in favor of temperance; when I staggered up to him, says I—Mr. you're a —— old fool. When I became a sober man I resolved, the first chance I had, to apologize to him, and this is it; and now, old man," said he, grasping Mr. Hunt's hand, "I ask your pardon, for you was the man," the audience made old Faneuil ring again, while they were congratulating one another on the change which had taken place.

FROST'S IMPROVED BRICK-MACHINE.

Fig. 1.

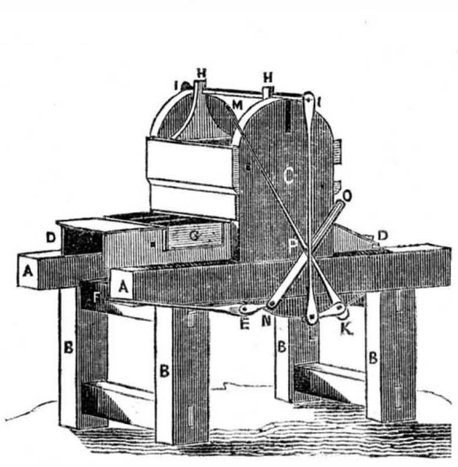


Fig. 2.

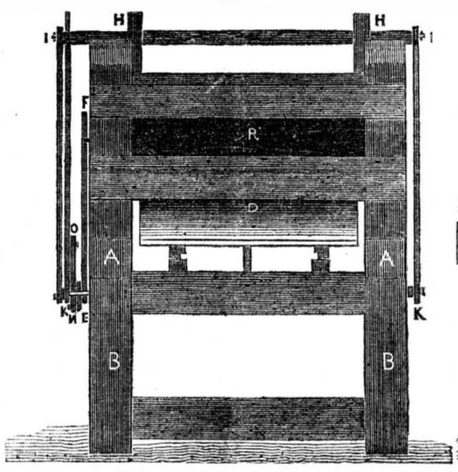
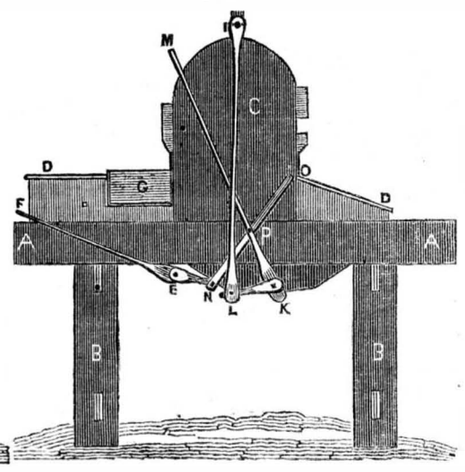


Fig. 3.



DESCRIPTION.—Fig. 1 is a perspective view: fig. 2 a rear end view, and fig. 3 a side view of this machine. Two parallel beams, A A, three feet long and thirty inches apart, supported by four legs, B B B B, and connected to each other by cross-beams, constitute the frame by which the machine is supported. Two head posts, C C, made of planks, ten inches wide, are attached to the side beams, and ascending about two feet, are connected to each other by planks, which extend across, and are nailed to the sides of the posts: and these posts and planks constitute a moulding-box, at the bottom of which the operation of filling the moulds is performed. A horizontal carriage, or sliding frame, D D, thirty inches long, and twenty inches wide, consisting of three parallel bars, connected by cross-bars, is placed under the moulding box; and being covered with boards, constitutes the bottom or floor of the box. The centre bar of the carriage has rack teeth, which take to the teeth of a geer-quadrant, which is attached to a shaft, the ends of which appear at E, and to which is attached the lever E F, by means of which the carriage is moved backward or forward. A brick-mould, G, of the ordinary form, with three or more apartments, is placed on the carriage, and by the elevation of the lever, E F, is carried under the moulding box. A horizontal plank or packer of length and breadth corresponding to the interior of the moulding box, is placed therein, and from the two ends of this plank, two small sliding posts, H H, ascend, and a horizontal bar or elevator, I I, passes through the heads of the sliding-posts, and through a vertical slot in each of the head-posts, or ends of the moulding box, and is connected to the cranks, K K, by the upright *pitmans*, L I. These cranks are attached to the ends of a horizontal shaft, which is put in motion by the lever K M, in a manner to elevate or depress the packer within the box. The slot-lever, N O, in connexion with the crank E N, has the effect to elevate the lever, K M, by means of the pivot P, whenever the lever E F, is brought down to a horizontal position. Through the back side of the moulding box, is an aperture, (as shown at R, fig. 3) which is closed by the packer when the latter is depressed, and opened by its elevation. This moulding-machine, when prepared for operation, is placed in contact with a clay-mill, in which the clay is ground and mixed, preparatory to moulding: and through the aperture above mentioned, the prepared clay is received into the moulding box, while the lever, E F, is in a vertical position; and then by the depression of the lever K M, the clay is forced into the mould; and by the depression of the lever, E F, the carriage, with the full mould, is brought forward, while by the same motion the lever, K M, and packer, are re-elevated. This improvement has been recently invented by Mr. John W. Frost, of Croton, N. Y., who has taken measures for securing a patent therefor.

A CANINE MAIL CARRIER.—An English paper says that the Derby mail is met every morning, at 10 o'clock, by a dog from an extensive iron works at Workshop, waiting to be the bearer of the letter bag for his master, which is regularly dropped by the guard without waiting. If, however, the canine messenger is not out somewhere about 10, the horn is sounded, and the dog is immediately observed in the distance coming along the road with all speed to meet the mail at the lane's end; but this is very seldom the case, as the dog usually seats himself upon the wall adjoining the works, listening for the approach of the mail. When a bag is thrown down, the faithful creature, without delay, invariably takes the nearest way home through the hedge over the fields. Later in the day, the empty bag is brought back by the dog to meet the mail to Derby, but, in consequence of the guard not getting off his seat, it is necessary to send a person with the bag, who can throw it upon the mail while it is going. The dog, feeling his inability to supply the deficiency, denotes his anxiety by barking and howling.—With this exception, the animal performs all the duties of a letter-bearer for his master, with punctuality and despatch.

AIM HIGH.—Whatever you do, perform well, and endeavor to improve. Are you a lawyer? Rest not satisfied with being a pettifogger, a collector of bills, a pleader in the lower courts. Study, that you may take a high rank. Are you a minister? Preach well, and study your subject. Don't be a lazy drawling pastor of a meagre church; elevate your people and put energy in them by your discourses. Are you a mechanic? Do your work well, and charge accordingly; never suffer an article to go from your shop that will not bear examination—that you would not be willing to stamp the maker's name upon it. Are you a merchant? Be attentive to your business; understand perfectly what you are about; leave not your offices too much in the hands of clerks; suffer not your accounts to go to loose ends. Are you a laborer? A fisherman, or a clam-digger? Be faithful to your business and do every thing well; 'tis the only way to succeed.

PATENTS.—According to the annual report to Congress, recently made by the Commissioner of Patents, it appears that the whole number of patents issued in 1845 is 502, including re-issues, additional improvements, and designs. Patents that have expired during the same period, is 470. The receipts of the office amount to $57,076 14, of which sum, $8,223 33 have been paid on account of applications withdrawn, &c. The expenses of the office, in all, $31,172 32; leaving a nett balance of $11,680 46 to be credited to the Patent Fund. The whole number of patents issued by the United States for inventions, up to January, 1846 is 14,526. The general business of the office, as well as its receipts, during the past year, has greatly increased over that of any former year.

VALUABLE CARGO.—It is gratifying to the mercantile world and the prospects of uninterrupted peace, to see the large cargoes shipped to England. The Rappahannock cleared at New Orleans for Liverpool, had the following cargo: 3004 bales cotton, weighing about 1,300,000; 4230 bbls. flour, 515 bbls. and tierces lard; 272 tierces beef; 10,200 pipe staves; 892 bundles green hides; 1352 dry hides; 75 bbls. tallow; 14 casks copper; 10 bales wool. The cargo is equal in bulk to about 4575 bales cotton, and is valued at $134,649.

SMALL FARMS.—Emigrants locating in Wisconsin, which seems to be the favorite place for settlers, go for small farms corresponding with their means and within their power to cultivate. In February alone, there were sold at the Land Office, Milwaukie, 6,041 acres, a large proportion being 40 acre entries, and which produced $20,382—the entries were one hundred per cent. over last year's. In this way every farm will be immediately cultivated, and with that prolific soil every family can make something more than a living after the ground is cleared and the log cabin erected; the whole expense of land, house and clearing, being under *one hundred dollars*. At this rate that State will soon have a dense population.

IMPROVING AN ACCIDENT.—A story is told of Mr. Van Buren, that while on a tour through the West in 1840 he was overset in a stage coach, and as he stood up to his knees in mud, and asked the driver how the accident happened, was told by that personage that he had already upset eleven members of Congress, and by so doing had secured the votes of every one of them for appropriations to the National Road, and as he never before had a President for a passenger, he thought he would improve the opportunity by doing his duty to the West, in endeavoring to prevent a Veto, in case another appropriation should pass.

SAILOR'S WIT.—Some time ago one of our ship owners in getting away a vessel had considerable trouble with one of his men, by the name of Cain or Kane, who had got rather top-heavy on his advanced wages. After the vessel had accomplished her voyage, on settling with the crew, it came to this man's turn for settlement. "What name?" asked the merchant. "Cain, sir," was the reply. "What!" rejoined the merchant, "are you the man who slew his brother?" "No, sir," *I am the man that got slewed.*"

HINTS TO YOUNG MEN.—Always have a book within your reach, which you may catch up at your odd minutes.

Resolve to edge in a little reading every day, if is but a single sentence. If you can gain fifteen minutes a day, it will be felt at the end of the year.

Regulate your thoughts when not at study. A man is thinking even while at work. Why may he not be thinking about something that is useful?

THE PETRIFIED FOREST.—One of the most remarkable natural curiosities in Texas, is a petrified forest near the head of the Pasgono river. It is turned to stone! Some trees now growing are partly petrified. This is a startling fact for natural philosophers, and must cause them to modify the existing theory of petrifaction.

VERY GOOD.—A petition was presented in the Tennessee House of Representatives, praying for the passage of an act to legalize a lottery for the purpose of completing the Cathedral, at Natchez. Mr. McCaughan opposed the petition, saying "he had no objection to the erection of a church to worship our Savior in, but was opposed to calling on the devil to build it."

AN IMPORTANT FACT.—There are published in the United States alone as many periodicals and papers as are produced in the whole of Europe. It is no matter of surprise then that America should be centuries in advance of the Old World in point of intelligence and the general diffusion of knowledge.

BARYTES *vs.* WHITE LEAD.—A mine of barytes is opened in Whately, Mass., about four and a half miles from Northampton Depot, and about a quarter of a mile from the track, which will furnish six hundred tons a year. The article has heretofore been sent to New Haven by the canal, and there ground for market and use. It has been sold at Philadelphia for $40 a ton. This barytes is a heavy whitish stone, with a metallic lustre resembling silver. Ground and mixed with oil and spirits of turpentine, it makes a shining white paint, which soon becomes hard. It is also mixed with white lead, the better to adapt it to some uses. Taken internally it operates as a virulent poison. It is said to be mixed with much of the white lead in use, and its effect is seen in the dingy color of many white painted buildings. It is considered difficult now to find any white lead which is not adulterated with it; but it is a gross fraud which ought not to be tolerated.

MEANING OF FLOWERS.—Rose bud—confession of love; Myrtle—love in absence; Forget-me-not—true love;—Bay leaf—I change but in dying; Crocus—Smiles; Violet—faithfulness, Pink—lovely and pure affection; Tansy—tender and pleasant thoughts; Globe—Amarynth—unchangeable; Star of Bethlehem—let us follow Jesus; Passion—religous fervor; Snow ball—thoughts of heaven; Orange flower—woman's worth; Lilly—purity and sweetness; Moss Rose—superior merit; Honeysuckle—fidelity; Laurel—virtue is true beauty; Jessamine—beauty and innocence.

ANTHRACITE FURNACES IN COLUMBIA CO.—We earn from the Columbia Democrat that No. 2 of the Bloomsburg Furnaces has been completed, and has been blown in, under the management of Mr. James Ralston, and is now doing well. The same paper says:—"We shall have in the spring four Anthracite Furnaces in operation, driven by Fishing Creek water-power, in the immediate vicinity of Bloomsburg." We are glad to hear it, and sincerely trust that our Government will adopt no ruinous policy to prostrate the Iron Trade of our Commonwealth, with which its prosperity is so intimately connected.—*Ex. pap.*

NAMES.—Emma is from the German, and signifies a Nurse: Caroline, from the Latin, Noble Minded; George, from the Greek, a Farmer; Martha, from Hebew, Bitterness; the beautiful though common name, Mary, is Hebrew, and means a Drop of Salt Water—a Tear; Sophia, from Greek, Wisdom; Susan, from Hebrew, a Lily; Thomas, from Hebrew, a Twin; Robert, from German, Famous in Council.

FUR TRADE.—Very few are aware of the great profits of the fur trade. In one of the large fur establishments in St. Louis, is a small bale neatly enveloved in sail cloth, about 3½ square feet, which will bring in this city $1200. It contains 1500 mink skins, originally costing 60 cents; and forty-five beavers, worth each from $2 to $3.20. The warehouses of that city have many valuable bales of furs from the Rocky Mountains.

PROVERB.—As lofty trees not only call down refreshing showers, but also attract the lightning, which destroys them, so mortals who aspire to rise above the common level must expect to gather tempests about thier heads.

There are over 23,000 children in New Jersey who are without education of any kind.

PATENT LAWS.

(Concluded from No. 28.)

SEC. 8. And be it further enacted, That so much of the eleventh section of the above recited act as requires the payment of three dollars to the Commissioner of Patents for recording any assignment, grant, or conveyances of the whole or any part of the interest or right under any patent, be, and the same is hereby repealed; and all such assignments, grants, and conveyance shall, in future, be recorded without any charge whatever.

SEC. 9. And be it further enacted, That a sum of money, not exceeding one thousand dollars, be, and the same is hereby, appropriated out of the patent fund, to be expended by the Commissioner of Patents in the collection of agricultural statistics, and for other agricultural purposes; for which the said Commissioner shall account in his next annual report.

SEC. 10. And be it further enacted, That the provisions of the sixteenth section of the before recited act shall extend to all cases where patents are refused for any reason whatever, either by the Commissioner of Patents or by the Chief Justice of the District of Columbia, upon appeals from the decision of said Commissioner, as well as where the same shall have been refused on account of, or by reason of, interference with a previously existing patent; and in all cases where there is no opposing party, a copy of the bill shall be served upon the Commissioner of Patents, when the whole of the expenses of the proceeding shall be paid by the applicant, whether the final decision shall be in his favor or otherwise.

SEC. 11. And be it further enacted, That in cases where an appeal is now allowed by law from the decision of the Commissioner of Patents to a board of examiners provided for in the seventh section of the act to which this is additional, the party, instead thereof, shall have a right to appeal to the Chief Justice of the district court of the United States for the District of Columbia, by giving notice thereof to the Commissioner, and filing in the Patent Office, within such time as the Commissioner shall appoint, his reasons of appeal, specifically set forth in writing, and also paying into the Patent Office, to the credit of the patent fund, the sum of twenty-five dollars. And it shall be the duty of said Chief Justice, on petition, to hear and determine all such appeals, and to revise such decisions in a summary way, on the evidence produced before the Commissioners, at such early and convenient time as he may appoint, first notifying the Commissioner of the time and place of hearing, whose duty it shall be to give notice thereof to all parties who appear to be interested therein, in such manner as said judge shall prescribe. The Commissioner shall also lay before the said judge all the original papers and evidence in the case, together with the grounds of his decision, fully set forth in writing, touching all the points involved by the reasons of appeal, to which the revision shall be confined. And at the request of any party interested, or at the desire of the judge, the Commissioner and the examiners in the Potent Office may be examined under oath, in explanation of the principles of the machine or other thing for which a patent, in such case, is prayed for. And it shall be the duty of the suid judge, after a hearing of any such case, to return all the papers to the Commissioner, with a certificate of his proceedings and decision, which shall be entered of record in the Patent Office; and such decision, so certified, shall govern the further proceedings of the Commissioner in such case: *Provided, however*, That no opinion or decision of the judge in any such case shall preclude any person interested in favor or against the validity of any patent which has been, or may hereafter be, granted, from the right to contest the same in any judicial court, in any action in which its validity may come in question.

SEC. 12. And be it further enacted, That the Commissioner of Patents shall have power to make all such regulations in respect to the taking of evidence to be used in contested cases before him, as may be just and reasonable. And so much of the act to which this is additional as provides for a board of examiners, is hereby repealed.

SEC. 13. And be it further enacted, That there be paid annually, out of the patent fund, to the said Chief Justice, in consideration of the duties herein imposed, the sum of one hundred dollars.

Approved, March 3d, 1839.

EFFECT OF THE RUM TRAFFIC ON THOSE ENGAGED IN IT.—In Peterboro', Madison county, 29 persons, in 22 years, had been licensed to sell intoxicating drinks. Five abandoned the business without any gain to themselves, but having occasioned great loss to their industrious neighbors. Twenty were still, when the account was taken, all drunkards, and poor, and most of them a charge with their families upon the town. Four had died drunkards, and all poor.

CIVILITY.—When friends call on you, never be confused or in a hurry; treat them with hospitality and politeness, and endeavor to make them happy in their own way. Never tease them to do this or that which they do not prefer. True politeness consists in an easy and pleasant deportment, and in making our friends easy, and permitting them to enjoy themselves in that way which is most pleasing to them.

VERY TRUE.—A man who is perpetually snarling and finding fault, is a torment to himself and those around around. A sour and carping disposition is not that in which man can most happily pass through life. If the world is wrong, it will scarcely be set in the right track by kicks and cuffs.

THE POWER OF ELOQUENCE.—A Scotch elder, in praising his late minister, remarked that "he was a powerful preacher, for i' the short time he delivered the word amang us, he knocked three pulpits to pieces, and dang'd the inside out o' five bibles."

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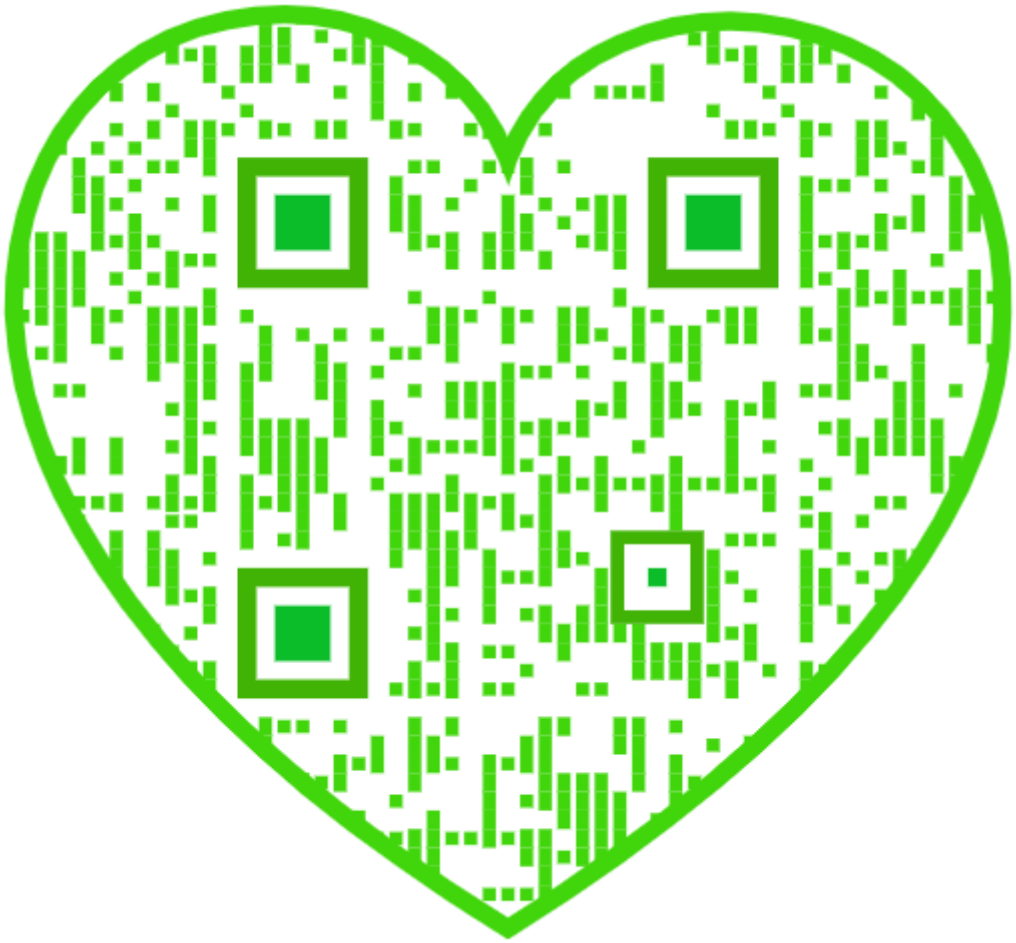
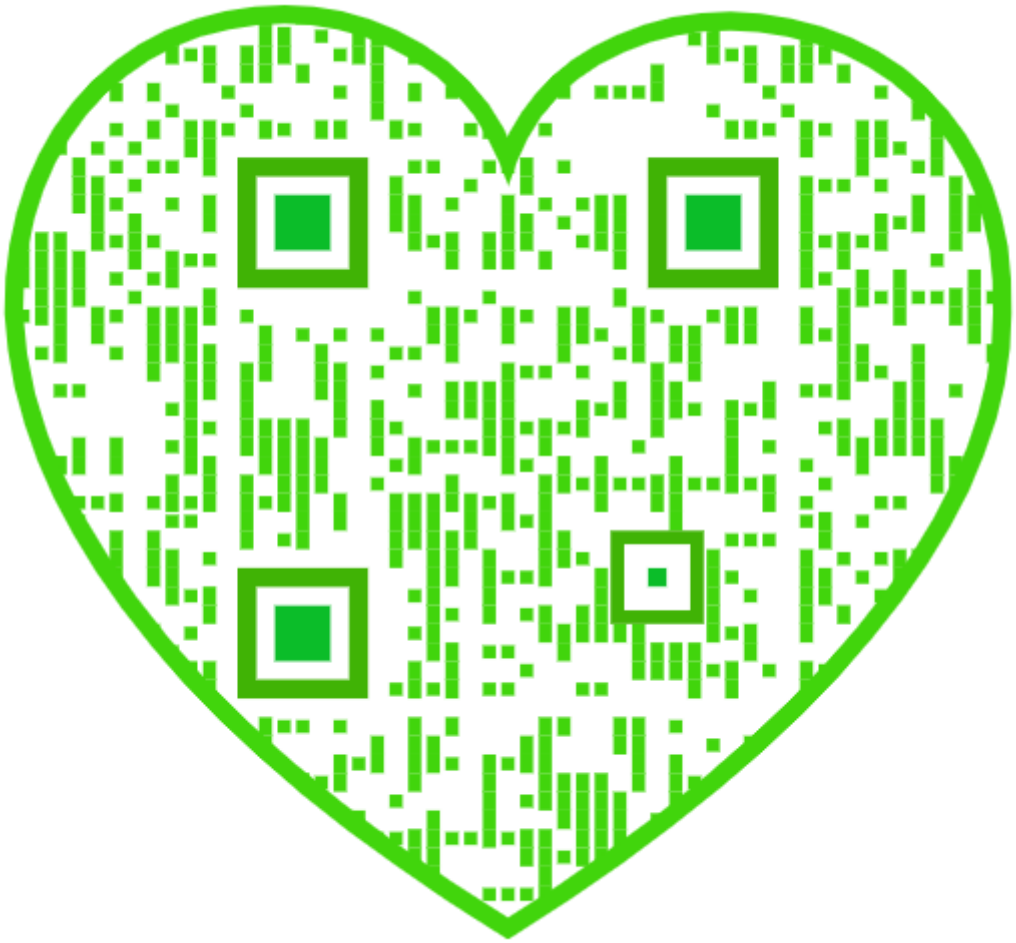




SCIENTIFIC AMERICAN

NEW-YORK, THURSDAY, APRIL 2.

Drawings of machinery, engraving on wood, and lithographic drawings, neatly executed, at the lowest prices, at this office.

Post Masters—Who receive this paper, will confer a special favor by mentioning the subject occasionally to scientific mechanics.

To Correspondents.—"Investigator," has our thanks for his communication; and we would respectfully solicit communications of scientific intelligence from all, reservsng to ourselves the right of selection or rejection.

W.S.W., is invited to furnish a description of his invention, which we shall insert, or give a good reason for declining.

Science of Mechanics.

(Continued from No. 28.)

Extraordinary Projections.—We have shown in a former number, that when a ball is projected horizontally, it will descend from the direct line of projection, at the same rate that it would descend vertically if let fall: of course if a ball is projected with sufficient velocity to travel a mile in one second, at an elevation of sixteen feet per mile, it will describe a curve and come to a level with the point of projection at the end of a mile. By this rule may be calculated the distance that a projected ball will travel, by knowing its velocity and elevation. The subject on which we propose to treat particularly in this number is the practicability of more extensive projections that has been practiced. We will suppose an experiment with an ounce ball. A force of two ounces being applied, and continued for the space of eight feet, will give it a velocity of thirty-two feet per second. Eight ounces of force will give the ball double velocity, or 64 feet per second. Two lbs. force will produce a velocity of 128 feet per second, 8 lbs. force will produce 256 velocity. Once more, 128 lbs. of force, applied to an ounce ball for the space of 8 feet will produce a velocity of 1024 feet per second; equal to about 12 miles per minute. This is about the same distance that a ball will descend when let fall, if unimpeded by atmospheric resistance; wherefore it is evident that the direction of a ball must be elevated to about 45 degrees, to be sustained one minute by that velocity. We will then again double its velocity by applying a force of 512 lbs. when the velocity produced will be nearly 24 miles per minute. An elevation of only about 23 degrees will now be required to sustain the ball a minute, and allow it to travel 24 miles before it strikes the water or land, if level. But in this calculation, no allowance is made for atmospheric resistance. In this respect, there will be found a great advantage in using a form diverse from a ball, for a projectile. To an eliptic spindle of the diameter of an ounce ball, but ten inches long, the atmospheric resistance will be merely trifling in the direction of its projection; while the said resistance will operate to prevent the vertical descent of the projectile in a four-fold degree. Wherefore it may be safely calculated that the application of the force last specified to a projectile of this form will be sufficient to project it 54 miles, with an elevation not exceeding ten degrees. To apply this quantity of force to a projectile, requires but very simple preparations. It is only required to provide a gun barrel eight feet long, and adjust thereto a metallic receiver for compressed air, with the ordinary air-gun valve, The compression of air need not exceed 2000 or 2500 lbs. per square inch, to effect the projection with the velocity above specified; yet it is not difficult to compress atmospheric air even to four times this density. In view of these points and principles, we can not consider it impracticable to extend a projectile to thirty, forty, and even fifty miles.

To be continued.

Gratifying.—A Southern correspondent requests that we "insert as little nonsense as possible." An admonition on that side of the question is refreshing, as most of the complaints on the subject of the contents of the paper, is that it is too rational and not sufficiently comical.

Correction.—At the close of the description of the satinet loom in our last number, we remarked that it was one of a great variety, descriptions of which had been *collected* by Mr. Gilroy, &c., which to some might convey the impression that Mr. G. had collected descriptions and plates which had been published, prepared, or written by others; but it should be understood that every article in "The Art of Weaving," was originally written by the author, and the engravings were all made under his immediate direction.

The Magnetic Telegraph.—We see it announced as a new discovery by Professor Morse, that the Magnetic Telegraph can be worked without the use of batteries. Our readers have long been apprised of the fact, however, that the telegraph may be operated by a magneto-electric machinery, without a battery, though it is still doubtful whether much advantage may be thereby gained. It is very probable that Prof. Morse has discovered some important improvements in the application of this or some other principle, to the telegraph systems, though the application of the magneto-electricity is not new.

Iron Business.—The Pittsburgh Gazette says: "The annual freshet in the Alleghany has brought some thousands of tons of pig to the city for a market, and owing to the healthy condition of the trade it has found ready sale. Most of the transactions are for time, say four and six months."

Galvanism.

Continued from No. 28.

Application of Electricity to Vegetation.—From the few experiments which have been made on this subject, it appears evident that much may be effected by the aid of galvanic electricity, in forwarding the growth of various plants. For this purpose, the seeds should be previously soaked in dilute oxymuriatic acid, or a dilute solution of muriate of ammonia, and sown in a light soil, moistened in part with the same liquid, and mixed with red or yellow ochre. Or instead of these solutions, the earth, for some kinds of plants, may be moistened with a dilute solution of sulphate of iron (copperas.) Two small plates of copper should be inserted vertically in the earth on opposite sides of the plant or cluster of plants, a few inches distant therefrom, that the galvanic fluid may freely pass from one to the other. It is best to have the earth enclosed in a long wooden box, in which case the plates may be placed farther distant from each other, and accommodate a larger number of plants between them; but the effect is similar in a common earthen flower-pot, or in open ground, if the plates are arranged near each other, with the seeds or plants between. The two plates are to be connected to the poles of a galvanic battery, at any convenient distance from the plants, and the battery is to be kept in constant action. A single cell, or a single pair of plates only are required, charged with solutions of sulphate of copper and sulphate of soda, as described in our last number. The soda solution requires to be renewed as often as once a week at least, and the copper solution must be kept saturated by a supply of the salt (blue vitriol) in the receptacles prepared for it, at the ends of the cell. Batteries suitable for experiments may be obtained for 75 cents, including plates and a quantity of the solutions: and the expense of supporting the battery in action will not exceed three cents per day. We admit the want of experience in this branch of galvanism, depending for information on what has been published or reported by others. In fact there appears to have been but little attention paid to this branch, and much remains to be learned from experiments which must necessarily occupy considerable time, though not much attention from the experimentor. We shall furnish the batteries and apparatns to those who may require them.

(To be continued.)

Illustrations of Chemistry.

(Continued from No. 28.)

The Alkalies.—There are several kinds of substances which have heretofore been considered as a distinct class of simple substances, but which have more recently been ascertained to be compound bodies, but partaking in a greater or less degree, of a peculiar property termed Alkaline, which property is in many respects directly opposed to that of acids. The principal Alkalies are Potash, Soda and Ammonia; but there are several kinds of earths which possess properties decidedly alkaline. Potash and Soda have metallic bases, and may be considered as oxydes of Potassium and Sodium. Ammonia, on the contrary, is known to consist of a combination of hydrogen and nitrogen, in the proportion of two to one. Potash and Soda, when pure, are exceedingly caustic and corrosive; but being exposed to the atmosphere, absorb a quantity of carbonic acid, and thus become mild carbonates. Pearlash is a carbonate of potash; and saleratus is a super carbonate of soda. The metallic base of potash, is of a silver color, and has a bright metallic lustre. It is lighter than water, and has so great an affinity for oxygen, that it can be only kept in naptha, a kind of oil which contains no oxygen. Ammonia is very volatile, and has a strong pungent smell: the carbonate is called hartshorn, and is used as smelling salts. It combines with muriatic acid gas, forming what is known as sal ammoniac, or muriate of ammonia. Alkalies invariably change vegetable blues to green, whereas acids change them to red; and when acids and alkalies come in contact, they combine and neutralize each other, forming what are called neutral salts, which are comparatively harmless.

Experiments.—Place a small piece or globule of potassium, on the surface of a glass of water: the potassium will absorb oxygen from the water so rapidly as to burst into flame.

Attach a piece of potassium to the wick of a candle that has been lighted and extinguished. Apply the point of an icicle to the potassium—which may be partly concealed in the wick,—and it will soon become ignited, and effectually light the candle.

Fill two glasses with an infusion of the common blue or purple cabbage: (water which has been poured while hot, over some leaves of the cabbage; or in which they may have been bruised.) Add to the liquid in one glass, a few drops of muriatic acid, and to that in the other, a little of a solution of potash or pearlash. The first will be instantly changed to a bright red, and the other to an equally brilliant green.

Wet some parts of a sheet of paper, with a solution of pearlash, and other parts with lemon juice; the paper when dry will remain white. Write on the paper with a common pen, using for ink the expressed juice of blue cabbage leaves. A part of the writing will be bright red, and other parts green, while on that part of the paper which has not been wet, it will remain blue.

Dissolve caustic soda in sulphuric acid (oil of vitriol.) The compound will be mild and harmless; being the same as a solution of common glauber salts; and on the same principle any of the acids may be neutralized by either of the alkalies, and vice versa.

(To be continued.)

Mr. Munger's Water-wheel.—Neither our former description of this excellent invention, nor the engraving accompanying it, were by any means calculated to do justice to the subject. But we have now obtained a working model thereof. and have a new engraving in progress, which we shall present in our next number, and with a more correct description thereof than we could possibly make out with the very imperfect knowledge of its construction which we had then obtained.

The Art of Painting

Continued from No. 28.

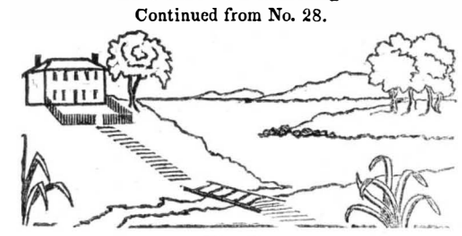
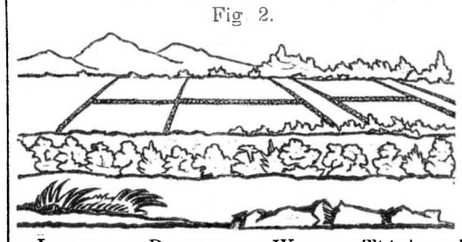


Fig 2.



Landscape Painting on Walls.—This branch of painting admits of such an endless variety of designs, that it would be in vain to attempt to give even a tolerable assortment for the use of a practitioner, in anything short of a book of 200 pages. We have presented two or three slight outline sketches, however, at the head of this article and shall furnish a few more in our next. The first sketch merely represents two capes in the third and fifth distance, with an ordinary farm house on the second, and a foot bridge crossing a small creek The second sketch represents a plain second distance, which is separated from the fourth distance by a river, on the near shore of which is a row of trees or bushes, partly concealed by the land. In the fourth distance is represented fields in perspective, with a road leading off from the river, as designated by the side fences: and high lands in the fifth distance. A beautiful effect may be sometimes produced by a slight representation of towns or cities in the fifth distance, of merely a few touches of the pencil with faint colors but which, assisted by the imagination of the beholder, will appear to represent spires, warehouses, streets, wharves, and shipping at anchor, or under sail, in the harbor. The only colors to be used in such representations are light slate, horizon red and white, each mixed with at least an equal quantity of sky-blue. Some of the most prominent objects and scenes which may be often repeated, though under different arrangements, are farms, fields, forests, farm-houses, palaces, arbors, wind-mills, observatories, villages, high rocks, ships, steamboats, sail-boats, islands, hunting scenes, carriages, cattle feeding or watering, children at play, military parades, water-falls, flower gardens, flocks of birds, balloons, canals, water-mills, railroads, bridges, &c. There must be a general consistency observed, and one scene made to connect with another, even although the different scenes should represent different seasons of the year. Whenever water-mills, cascades, cataracts, or even small brooks occur, a valley must be shewn, through which they may be seen or supposed to pass into the ocean: and if a road appears prominent at one point, it must be regarded in other more distant scenery, over which its route may be supposed to pass. The learner, for the purpose of acquiring the art of designing, should habituate himself to making close observations of objects, and scenery, and to imagine various scenes in his mind, diverse from anything which he has seen, and practice sketching such designs when his mind is most free from other cares. We shall proceed to the *claro-obscuro* painting in our next.

(To be continued.)

Trial of Tirrell.—The trial of Albert J. Tirrel for the murder of Maria A. Bickford, was commenced on Tuesday, last week, and the excitement on the subject was unprecedented. The circumstances of the case are highly interesting, and we should give a brief account of the progress of the trial, but for the consideration that it is rather out of the sphere of this paper, and that most of our readers will have seen the reports in other papers before receiving this. The trial was closed on Saturday, resulting in the acquittal of the evidently guilty murderer, who was, however, immediately arrested on a charge of arson, and remanded to prison. As his acquittal could not have been on the evidence, it must be attributable to the aversion of the Jury to capital punishment, not willing to be instrumental in destroying human life. Had the penalty been perpetual imprisonment there is no doubt he would have been convicted.

Security of Letters by Mail.—An *unsealed* letter was received yesterday from a remote section, at one of our city banks, containing a remittance of four thousand dollars.—*Boston Bee.*

On this subject we would remark that we have recently received several unsealed letters, enclosing money, from various sections, and believe there has not been a dollar mailed for us but what has come safely to hand. The present Post Office department is in an unusually healthy state.

Estimates of Railroad Business.—It is worthy of note that the business done on railroads, and especially the travel thereon has generally exceeded, and sometimes been treble the amount at first estimated, even by the foremost friends of the enterprise. The fact is, that roads create business; and it may be reasonably expected that when the Hudson river railroad is completed, the travel between New York and Albany will be more than double what it is at present.

Preservative Properties of Guano.—A coffin was lately exhumed at the island of Ichaboe, containing a human body which had been interred more than a century, but which was perfectly sound and firm. Even the duck trousers and cotton shirt in which he was dressed, retain their original strength and appearance. So says a London paper.

New York and Boston Line.—The steam boats prepared for the several Boston lines the ensuing season, are the Oregon, Knickerbocker, Worcester, Cleopatra, California, Massachusetts, Rhode Island, Narraganset, Mohegan and Neptune. There is no doubt that the fares will be low on all the principal routes.

Railroad Intelligence.

The contracts of the Providence, R.I., and Worcester Mass., railroad have been given out, and the grading is to be forwarded immediately.

The bill for the great Southern railroad, from the Mississippi to the Atlantic, has passed the Mississippi Legislature. The road is already in progress, and forty-five miles are completed.

The Connecticut River railroad has made a very fair beginning. The section from Hartford to Springfield, about 24 miles, has earned, clear of all expenses, within the year past, nearly $1000 per month. A new road is to be constructed, in extension, to complete a line from Boston to Sandwich, Mass.

The Governor of Pennsylvania has signed the law authorizing the New York and Erie Railroad to pass through that state.

The bill granting a charter for the Hudson River Railroad has passed in the N.Y. Assembly by a large majority. The company propose to expend two millions of dollars on the road within two years, and will probably complete the road in five or six years. This road, running as it will most of the distance, directly on the margin of the river, will be the most pleasant route in the United States.

It is in contemplation to extend the Somerville, N.J. Railroad from Easton to Elizabethtown Point, a distance of sixty-one miles. This road is reported to have been purchased by a Boston Company, who intend to convey loaded boats from the coal region over this road, to tidewater. This will prove a considerable advance towards railroad navigation, which we contend must eventually become extensively introduced.

A new track is to be laid at Lowell, Mass., by which the Concord and Nashua trains may run directly on to the Lowell and Boston road in the direction of Boston.

The new projected railroad route, from New York to Boston direct, appears to have become exceedingly popular. It is proposed to cross the Connecticut river at Middletown by a bridge high enough to allow sailing vessels to pass under it. We see no necessity for this, however, as certain new improvements in railroad draw-bridges will accommodate the road without discommoding the navigation of the river.

The great German road from Berlin to Vienna, is to cross the Neisse river by a bridge *one hundred and twenty-eight feet* above the level of the water.

The nett income derived from the New England railroads within the last year, was $1,743,369; viz., from the Boston and Lowell road $177,025: Boston and Maine $132,964: Boston and Providence $197-827: Boston and Worcester $237,728: Eastern, $233,309: Nashua $64,680: New Bedford, $48,-728: Norwich and Worcester, $70,079: Taunton, $15,647: Western, $442,858: Fitchburg, $122,526. On most of these roads, the dividend is from 10 to 13 per cent.

For the Scientific American.

Boston, March 17.

Mr. Porter—*Dear Sir:*—I observed in a recent number of the Scientific American, a notice of the systems of Phonography now before the people, and known as Pitman's and Bayley's. As this subject is at the present time attracting very great attention, it is important that the public should have every thing set before them in the proper light that they may judge understandingly of the merits of them. I have for some time past been examining the system of Mr. Pitman, which is taught by Messrs. Andrews and Boyle, of this city; and as I have witnessed some of its practical workings, I have thought it migh, not be uninteresting to your readers to give a short account of what can be done by it. The universal accord of all who have studied this system is, that it can be learned in a *very short* time—that its principles, founded on a philosophical analogy, can be applied with unerring accuracy in its practice, and that it is the most complete method of Reporting which has ever been devised. Of its applicability for the latter purpose, I witnessed an exhibition not long ago which completely satisfied me in relation to it. We may *theorize* as much as we please upon any subject, but it is quite a different thing to reduce the same to *practice*. This has been the great difficulty in bringing any system of Stenography into general use—a life time of practice being necessary to render it available. But a young man—a mechanic—who has devoted his moments of leisure from a laborious occupation to the study and practice of this art, reported a sermon of about an hour's length, verbatim, not omitting even the smallest word—as it is customary to do in other systems. The report was read, also, with almost as much ease as ordinary writing. I may remark that the speaker was very rapid, and sometimes indistinct in his delivery.

As your paper, from its character, is one which is devoted to the interests of the working classes, I trust that examples like the above may be followed by many who are now either letting their moments of leisure pass entirely unimproved—wasting them in the perusal of works of fiction, or in the senseless amusements which are so apt to allure the unwary into habits which will, in after life at any rate, do them no good.

This system of Phonography is now spreading very rapidly among mechanics; and it is among them that it is destined to accomplish the greatest triumphs. This has been eminently the case in England, where there are many whose acquaintance with this system enables them to use it with the greatest facility in correspondence and all the purposes of business.

I will take occasion at an early opportunity to give you an account of some of the other uses to which the science of Phonetics as developed by Mr. Pitman, may be applied to practical purposes.

Investigator.

The Late Freshet.—The Susquehanna river rose higher, by *twenty feet*, during the late freshet, than had been known for twenty years before. The Merrimack was so high at Haverhill, Mass, that of some of the dwelling houses, nothing remained in view but the chimney tops.

Variety

In 1737 there were but thirty-seven ploughs in the State of Massachusetts; and such was the indifference of the farmers on the subject, that premiums were offered by the authorities to encourage the adoption of them.

An Ex-Senator, by the name of Hazletine, taking offence at something published in the Eastern Ohio Democrat, lately broke open the door of the office and destroyed the press and threw the types into the street.

A popular phrenologist of this city, recommends that all candidates for marriage should be subjected to phrenological examination to see whether they are well matched, before license of marriage is granted.

An iron-planing mill is in operation at Providence, R. I., in which castings weighing from fifty pounds to five tons are rapidly planed and polished by steam power. It is doing a large business.

About two thousand Mormons took up their line of march from their encampment in Iowa, on the 1st of March, on their way to California. They would do better at the Sandwich Islands.

During the last year, there were eighteen applications for extension of patents, of which only three were granted. One of the three, we are happy to learn, was on our friend Bogardus's *eccentric Mill.*

A seal, four feet and two inches in length, was lately caught on the ice of Lake Champlain. The fact is not generally known that those animals inhabit that lake.

The great skeleton giant, nineteen feet high, has been spoiled by the discovery of another pair of legs, which evidently belong to the same animal, and prove it to have been a young mastadon.

It is stated that fifteen millions of bricks are annually manufactured in Albany:—a number sufficient, if placed longitudinally in contact, to extend from New York to New Orleans.

An effort is being made to break up the villainous monopoly which has too long existed in the New York and Phil. Railroad Company. It is expected to compel the company to reduce the fare at least.

The newspapers in Mexico indulge in full liberty of speech on political subjects: one of them advocates the return of Santa Ana, and another openly recommends a monarchy.

Fifty canal boats are building at the different yards in Rochester, for the spring business. Their aggregate value, when completed, will be about $75,000—$1,500 each.

The Jacksonville (Flo.) News speaks of seeing a big turnip which grew *about three miles*—not in circumference, reader, but three miles from that place, and which weighed 17 pounds.

The duties required and paid by Harnden & Co, on the goods brought by the stermers Hibernia and Cambria, under their charge, amounted to the round sum of $90,000.

M. Gaudin, a French chemist, has invented an inextinguishable light, from a combination of alcohol, which, he says, can be distinguished at a distance of 30 miles.

In India, notwithstanding the heat of the climate under a scorching sun, most of the manufacturing business, and especially weaving, is done in the open fields or streets without shelter.

Upwards of 7000 tons of white beach-gravel have been taken from Long Island beach, to England, since the 15th of September last. It is used for park and garden walks.

A cotemporary says that Wisconsin has already fifteen newspapers, and *two more are to be started!* Surely he anticipates great improvements in the course of time.

There are now stated to be upwards of 500,000 bushels of wheat in store, between Peru, (Ill.) and the mouth of the Illinois river. No great prospect for speculators in flour.

Father Matthew, with many others, are said to be making great efforts to introduce *stir-about* (hasty pudding) into Great Britain in general, but especially Ireland.

A fellow climbed one of the poles of the Magnetic Telegraph, in Philadelphia, the other day, and applied his ear to the wires, in order to hear the news. Of course he became enlightened.

Such was the demand for newspapers in Boston, during the trial of Tirrel, that the publishers of the Boston Mail sold upwards of 200,000 copies in one week, including extras.

A rich copper mine has been discovered in Lynnfield, Mass., only about ten miles from Boston. It has been bought up by a company in shares of two hundred dollars each.

An almanac has been published in London, which contains what purports to be a list of the "Sovereigns of Europe," and among them, in regular order, is "John Polk, of America."

Forty-six Doctors of Medicine, have been recently let loose upon Society, from the Medical College of Cincinnati, O. Look out for them.

A criminal in China has been sentenced to be cut into *ten thousand pieces* in the open market place. He is not expected to survive the operation.

A monster wolf, weighing 85 pounds, and measuring seven feet in length, was lately killed on the ice at Long Beach, N. B.

The Kennebec Journal says that upwards of forty vessels, some of them large ships, are now building on the Damariscotta river.

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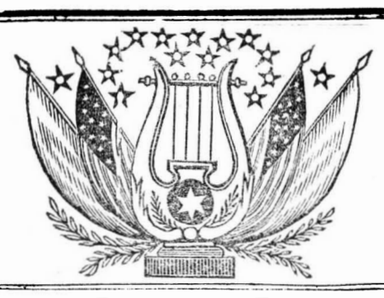


The Poor and the Rich.

The rich man's son inherits lands,
And piles of brick and stone and gold,
And he inherits soft white hands,
And tender flesh that fears the cold,
Nor dares to wear a garment old;
A heritage, it seems to me,
One would not care to hold in fee.

The rich man's son inherits cares.
The bank may break, the factory burn,
Some breath may burst his bubble shares,
And soft white hands would scarcely earn
A living that would suit his turn;
A heritage, it seems to me,
One would not care to hold in fee.

What does the poor man's son inherit?
Stout muscles and a sinewy heart,
A hardy frame, a hardier spirit;
King of two hands, he does his part
In every useful toil and art;
A heritage, it seems to me,
A king might wish to hold in fee.

What does the poor man's son inherit?
Wishes o'erjoyed with humble things,
A rank adjudged by toil-worn merit,
Content that from employment springs,
A heart that in his labor sings;
A heritage, it seems to me,
A king might wish to hold in fee.

What does the poor man's son inherit?
A patience learned by being poor,
Courage, if sorrow come, to bear it;
A fellow feeling that is sure
To make the outcast bless his door;
A heritage, it seems to me,
A king might wish to hold in fee.

Oh, rich man's son, there is a toil
That with all others level stands;
Large charity doth never soil,
But only whitens soft white hands;
This is the best crop from thy lands,
A heritage, it seeems to me,
Worth being rich to hold in fee.

Oh, poor man's son, scorn not thy state,
There is worse weariness than thine:
In merely being rich and great;
Work only makes the soul to shine,
And makes rest fragrant and benign:
A heritage, it seems to me,
Worth being poor to hold in fee.

Both heirs to some six feet of sod,
Are equal in the earth at last—
Both, children of the same dear God.
Prove title to your heirship vast,
By record of a well-filled past!
A heritage, it seems to me,
Well worth a life to hold in fee.

Little Nell.

Spring, with breezes cool and airy,
Opened with a little fairy;
Ever restless, making merry,
She, with little lips of cherry,
Lisped the words she could not master,
Vexed that she could speak no faster—
Laughing, running, playing, dancing,
Mischief all her joys enhancing,
Full of baby-mirth and glee,
It was a joyous sight to see
Sweet little Nell.

Summer came, the green earth's lover!
Ripening the tufted clover—
Sending down the glittering showers—
Breathing on the birds and flowers—
Rivalling young, pleasant May
In a generous holiday!
Smallest insects hummed a tune
Through the blessed nights of June,
And the maiden sang her song
Through, the day so bright and long,
Dear little Nell.

Autumn came! the leaves were falling,
Death the little one was calling;
Pale and wan she grew and weakly,
Bearing all her pains so meekly,
That to us she grew still dearer
As the trial-hour drew nearer;
But she left us hopeless, lonely,
Watching by her semblance only,
And a little grave they made her—
In the church-yard cold they laid her—
Laid her softly down to rest,
With a white rose on her breast—
Poor little Nell.

Original.

The Shavers.

The Barber shaves with polished blade,
The Merchant shaves in constant trade;
The Broker shaves on twelve per cent,
The Landlord shaves by raising rent.
The Doctor shaves in patent pills,
The Tapster shaves in pints and gills.
The farmer shaves in hay and oats,
The Banker shaves on his own notes;
The Lawyer shaves both friends and foes,
The pedlar shaves where'er he goes.
The office-holders shave the nation,
The Parson shaves in men's salvation;
The wily churchman shaves his brother,
And people all shave one another.

"We intend to *leave* in a short time," said the trees the other day.—*Manchester Mes.*

Going to have a regular *blow-out*, we suppose.—*Woburn Gaz.*

They must be rather *green* to think of such *folly*-age.

"Arts and Trades"—again crowded out; but will receive due attention after the conclusion of the Art of Painting.

Selected Articles.

Monkeys.—An impertinent curiosity runs through all their actions; they can never let things alone, but must know what is going forward. If a pot or kettle is set on the fire, and the cook turns her back, the monkey whips off the cover to see what she has put into it, even though he cannot get at it without setting his feet upon the hot bars of the grate. Mimicry is another of the monkey's qualities. Whatever he sees men do he must affect to do the like himself. He seems to have no rules of his own, and is ruled by the actions of men or beasts, as weak people follow the fashion of the world, whether it be good or bad. No monkey has any sense of gratitude, but takes his victuals with a snatch, and then grins in the face of the person who gives it him, lest he should take it away again; for he supposes all men will snatch what they can lay hold of, as all monkeys do. Through an invincible selfishness no monkey ever considers an individual but himself, as the poor cat found to her cost, when the monkey burned her paws with raking his chestnuts out of the fire. They never eat together in company without quareling and plundering one another. Every monkey delights in mischief, and cannot help doing it when it is in his power. If any thing he takes hold of can be broken or spoiled, he is sure to find the way of doing it; and he chatters with pleasure when he hears the noise of a china vessel smashed to pieces upon the pavement. If he takes up a bottle of ink he empties it upon the floor. He unfolds all your papers and scatters them about the room, and what he cannot undo he tears to pieces; and it is wonderful to see how much of this work he will do in a few minutes when he gets loose. Every body has heard of the monkey whose curiosity led him to the mouth of a cannon to see how it went off, when he paid for his peeping with the loss of his head. In a ship where a relation of mine was an officer, while the men were busy in fetching powder from below and making cartriges, a monkey on board took up a lighted candle and ran down to the powder-room to see what they were about; but happily, was overtakn just as he got to the lantern, and thrown out of the port-hole into the sea, with the lighted candle in his hand. Another lost his life by the spirit of mimicry; he had seen his master shave his own face, and at the first opportunity took up the razor and made a shift to cut his own throat. When the wild monkeys have escaped to the tops of trees, the people below who want to catch them, show them the use of gloves, by putting them on and pulling them off repeatedly, and when the monkeys are supposed to have taken the hint they leave plenty of gloves on the ground, having first lined them with pitch. The monkeys come down, put on the gloves, but cannot take them off again, and when surprised, betaking themselves to the trees as usual, they slide backwards and are taken.

* * * * * *

A late neighbor of mine in the country kept a monkey who took to riding his hogs, especially one of them, which he commonly singled out as fittest for his use; and leaping on its back, with his face towards the tail, he whipped it unmercifully, and drove it about till it could run no longer. The hogs lived under such continual terrors, that, when the monkey first came abroad in the morning, they used to set up a great cry at the sight of him.

A well known nobleman once had a wild horse whom nobody could ride. "I know not what your lordship can do with him," said one "but set the monkey upon his back." So they put a pad to the horse, and set the monkey upon it with a switch in his hand, which he used upon the horse, and set him into a furious kicking and galloping; but Pug kept his seat and exercised his switch. The horse lay down upon the ground; but, when he threw himself on one side, the monkey was on the other: he ran into a wood with him to brush him off; but if a tree or a bush occured on one side, the monkey slipped to the other side, till at last the horse was so sickened and fatigued and broken spirited, that he ran home to the stable for protection. When the monkey was removed a boy mounted him, who managed the horse with ease, and he never gave any trouble afterwards.

Railroad to Oregon.—A railroad from the head of steam navigation on the Atlantic side of our country, to the mouth of the Columbia river, will be of incalculable advantage to the civilized world.

1st. It will bring two oceans within two weeks of each other.

2d. It will open the interior of our country to settlement, and make two great markets, embracing the world, for its products.

3d. It will be the channel of trade between Europe and the East Indies, with all intermediate and neighboring islands, countries, &c., and as such will be a bond of peace between those nations and the United States.

4th. It will increase the Eastern, and create a Western Commerce for our country almost too vast and important to be conceived of.

5th. It will enable the United States to defend its shores with greater facility.

6th. It will encourage emigration, and diffuse a hardy race of people over the whole West.

7th. It will ameliorate the condition of the East, and cause emigration from Japan and other Eastern powers, who will reach the New world without sailing round it.

8th. It will enable the United States to collect a revenue for the support of government, by a toll upon the goods that pass over it from one foreign country to another.

9th. It will make Republics of the Islands midway of the Pacific, and revolutionize the despotisms of China, Tartary, and Japan.

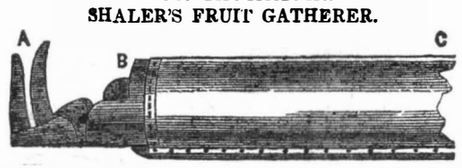
10th. It will concentrate the Commerce of the World upon our shores, and pour the wealth of nations into the lap of our country.

11th. It will enable the Magnetic Telegraph to be safely extended along its line, and make a chain of instantaneous communication between Boston and Oregon City.—*Washington Journal.*

A vast and beautiful cave has been discovered near Middletown, Va. It has been explore ½ a mile

New Inventions.

SHALER'S FRUIT GATHERER.



This excellent, simple, and convenient implement has been recently invented by Mr. Reuben Shaler, of Brandford, Conn. It consists of a long rod or pole (a section of which is shown in the cut,) to the end of which is attached a sheet-iron hand or grapple, A B, having a slot at the end and on each side, for the purpose of taking hold of the fruit on a tree, and gently detaching it from the branch. A cloth hose, B C, which is attached to the rod, and extends the whole length thereof, receives the fruit—apples, peaches, &c.,—and safely conducts them, one at a time, to the hand of the collector, who lays them, unbruised, in a basket. Mr. Shaler intends to apply for a patent for his invention as soon as he shall have sufficiently tested its utility.

Sawing and Planeing Machine.—A machine has been invented by Mr. J. Colton, of Amherst, Mass., to be worked by hand-power, for sawing wood, splitting boards and plank, planeing boards, and boring timber. It is compact and portable, and can be placed in any carpenter's shop, and by the power of one man at the crank, it performs business in a neat and rapid manner. The cost is stated to be not exceeding fifty dollars: but this is most probably an error. The great advantage gained in this machine, is by the use of heavy fly-wheels, which accumulate and retain the power applied during intermissions of the application of the machine to the work.

New Iron Bridge.—The Washington Times speaks highly of an iron bridge, invented by Dr. Orr, of Cincinnati. It is composed entirely of iron, except the floor, and dispenses entirely with pins and abutmens, being supported by iron columns. It is not on the strait line principle, but inclines each way from the centre. We judge from the description given, that it is an elegant model for ordinary bridges, but that in strength and permanency it comes far short of the excellent iron bridge for railroads, recently invented and about to be introduced on the large scale, by a Mr. Rider of Southbridge, Mass., a model of which we have examined. We shall give a full description of this bridge, with an engraving, in a few days, that the public may judge of its merits.

Improvement in Hats.—Mr. John Barker, of Newburgh, has discovered a mode of mixing fine Wool and Fur in the manufacture of Hat Bodies, so as to avoid the weight and clumsiness of those composed wholly of the former, and the liability to crack of those composed of Fur only. In the new Hat, the elasticity given by the Fur is combined with the strength of a Wool body, avoiding the defects of either.

Drilling by Horse Power.—The Buffalo Express mentions a recent invention, by a gentleman in that city, Mr. Scovill, of a drill to be worked by horse or steam power. The utility of this machine is said to have been thoroughly tested on the Illinois and Michigan canal, where it has been made to bore in a solid rock, a hole five inches in diameter, forty feet in a day. It is estimated to do the labor of twenty-five men at least.

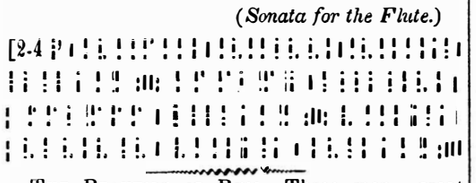
McConnell's Propeller.—There is much newspaper praise of McConnell's new propeller, but without any description being given. As soon as we can get sight of a model, or full description of this invention, we shall be prepared to inform our readers about what proportions of utility or of humbug attaches thereto. Dry praise, without any description, has but little influence in raising our opinion of any mechanical invention.

New Rotary Shears.—We are informed by a gentleman from Berlin, Ct., that Messrs. L. & L. J. Lamb, of that place, have invented and put into successful operation, a machine for cutting tin plate and sheet iron, with great accuracy and facility. We shall probably procure a description of the invention, and perhaps may furnish an engraving.

Original Music.

TRIP TO THE SPRINGS.

(*Sonata for the Flute.*)



The Beauties of Rum.—Three men,—great sticklers for liberty of course,—each with a team in charge, were recently found so intoxicated while attempting to drive through Gorham, Me., that they could neither take care of their teams nor themselves; and as their more rational horses had not the means of taking care of them, they would have perished but for the kindness of strangers, who got them into a house, and took care of their teams.—They had been to Portland, disposed of their loads, and were returning with a supply of rum. Is it not astonishing that such prominent characters as Daniel Webster will plead the Constitution against restraining the traffic in an article which daily produces such degrading and destructive scenes? Surely no rational man can esteem one as a "friend to his country," who will publicly advocate this traffic.

Great Woollen Factory.—A company has been incorporated in Essex, Mass., for the purpose of erecting and operating an extensive woollen manufactory, which is expected to be superior to anything of the kind in the United States. It is calculated to consume 1,500,000 lbs. of fine wool per annum.

Prefer solid sense to wit; never study to be diverting, without being useful; let no jest intrude upon good manners, nor say anything that may offend modesty.

When the sun goes down look out for the stars.

Literary Notices.

The Addresses and Messages of the Presidents of the United States, from 1789 to 1846.—This is the title of a splendid work, in two volume, just published by E. Walker, 114 Fulton st. This work contains, in addition to the speeches and messages, a memoir of each of the Presidents, and a history of their administrations, together with a variety of statistical information. There is not probably a work in print so well calculated to amuse and gratify those who have been accustomed to take an interest in the general political affairs af this country, as the book in question. It is nevertheless afforded at a remarkable low price, and we should judge that no old politician can remain long contented without the possession of a copy.

The Literary Emporium, and the Young People's Magazine.—These two twin-gems of literature, for April, have been issued, and surpass in style and embellishments even the previous numbers of the same works. The former is embellished with a superb steel-plate landscape scene, representing the Indian village of St. Regis, on the St. Lawrence. Also a colored print of the *Cornus Florida.* The Young Peoples' Magazine has a fine mezzotint of a beautiful mother with her children; and a beautifully colored print of the American Centaury. Each work abounds with well written articles on interesting subjects, and is becoming decidedly popular. Published by Wellman, 118 Nassau st., N. Y.

Sears' New Pictorial Family Magazine, for April, is received, and deserves something more than a passing notice. This number contains twenty or more embellishments, some of them large and finely wrought engravings. Published by R. Sears, 128 Nassau st.

Steam-Engine Manufactory.

The extensive engine manufactory of Mr. Wm. Burdon, of Brooklyn, is probably not excelled by any establishment in the United States. It occupies three brick buildings, one 56 by 40; one 138 by 25, and one 56 by 90 feet in extent, and these not comprising several auxiliary shops appertaining to the establishment. The machinery and tools, all new within the last two years, are valued at $75,000, and the real estate on which the premises are built, is $40,000. Mr. Burdon has now *sixty* engines constructing and nearly finished, of from eight to sixty horse power. *Four* are of sixty horse power, six of thirty, twelve of twenty, twelve of fifteen, twelve of ten, and fourteen of eight horse power. These engines will weigh from 3000 to 35,000 pounds each, and are very simple in their construction, and little liable to get out of order.

There are used in these works 2500 tons pig iron, 1500 tons wrought iron, 10,000 pounds steel, 10,000 pounds copper, 8000 pounds zinc, 3000 pounds antimony, 3000 pounds lead, 8000 pounds tin, annually, which are probably worth not far from $100,000, and will bring, when manufactured and sold, about $300,000. Besides the anthracite coal, there are consumed 10,000 bushels Virginia coal, 800 bushels chestnut coal, and 50 cords of wood, annually, with an immense quantity of other articles too numerous to mention.

Mr. Burdon is a practical, scientific, and very ingenious mechanic, and employs upwards of one hundred and thirty men, whose wages amount to over twelve hundred dollars per week, which is paid every two weeks, requiring a capital of near *two hundred thousand dollars.*

Coal.—The name "Peach Orchard" is unmeaning and vulgar, and used only in New York; it betrays ignorance, as there are two other names with full meaning, and very well known in the English language, "Red Ash," and "Ferugineous" coal. Ferugineous means a *mixture of iron*, which causes the coal to burn at a higher temperature and makes the ashes of a reddish color. The name "Peach Orchard" was given to a small mine of Red Ash coal, near Pottsville, which has not been worked for more than nine years, and, consequently, *there is no such thing as Peach Orchard coal.*—*Communicated.*

Rain Water.—It is generally supposed that rain water, distilled as it is by the process of nature, is perfectly pure: but it may be readily proved by the following simple process, to contain a quantity of ammonia. Take some of the water in a porcelain bowl, and add a few drops of muriatic acid, which will combine with the ammonia and prevent its evaporation; evaporate the water nearly to dryness. Then add a little pure lime, which will combine with the acid, forming a muriate of lime, while the ammonia will be liberated and readily manifested by its pungent peculiarities.

A Broadhorn.—The largest flat-boat ever brought to New Orleans, was landed at Freeport on the 10th. She is 125 feet long by 21 wide, and contains two thousand forty-five barrels of flour, all of one brand! She was loaded at Laurenceburg, Ind.

Decidedly Hoggish.—The Wabash Express gives an account of hogs in Vermillion County, Indiana, which puts that county, in spite of its poetic name, at the head of universal swinedom. One hog weighed, *nett*, 667 lbs., a second 716 lbs., and a third 755 lbs! There was one lot of ten hogs, which averaged a fraction over 600 lbs. a-piece.

Steam Communication between Portland and Halifax.—A novel and interesting project is in progress to establish a steamboat communication between Halifax, in the Province of Nova Scotia, and Portland, with intermediate touching at the principal ports on the coast of Nova Scotia, south of Halifax.

The Everlasting Gold Pen.—We believe it is understood by our readers, that the price of Bagley's gold pen is *four dollars*, and not 400 dollars, as our types insisted on stating it in our last number; though to some business men we think they may be worth in utility, the amount represented by said types. We shall furnish them to order at $4 each

The Rational Indian.—A Parable.

A young farmer who had emigrated from Connecticut to the Western borders of Missouri, occasionally indulged himself with a ramble in the plains and forests, and not unfrequently fell in with parties of the aboriginal inhabitants; but such was the gentleness and suavity of his manners, that he invariably gained their confidence, and was sometimes treated with marks of peculiar friendship and respect; and in return, as some of them conld understand English, he communicated much useful and interesting intelligence. On one of these occasions, having fallen in company with some whom he had seen before, but others, who were strangers, there chanced to be present a young man from a distant tribe, and who had learned something of the language by having passed some time with some English hunters, but had never learned anything of the science or religion of the white man. This young man manifesting a deep interest in some remarks casually made by the Yankee on the subject of a Divine Providence, asked many questions relative to the white man's God, and with such apparent eagerness, that the young farmer found himself constrained to take a part which he had been accustomed to regard with almost detestation,—that of preaching the gospel to the heathen. The Yankee being impatient to return, had already left the company, while the young native, eager to learn, had kept close to him, and listening with the most engaged attention to the answers of the white man to his many questions. "Do you say," enquired the Indian, "that the very own Son of the great Creator, came and dwelt among men, and suffered himself to be killed that he might thereby give everlasting life and happiness to those that obey his commands?" "I do say so," replied the Yankee. "And that every man who does all he can to please the Son, can be sure to be loved by him, and to be made beautiful and happy after leaving this world?" "Yes." "And that this beauty, and joy, and lovely company will last for ever and ever,—never have any end, nor come any nearer to an end?" "Yes, yes, I do say that." "Then stay and tell me all about what to do, so I may please the Son." "Is it to run all my life time with bare feet among briars,—I can do that. Is it to jump off of high rocks into the river and swim over the falls—I can do that. I will give you my gun,—all my furs,—every thing, if you will stop and teach me." Indeed, I can not stay," replied the farmer, "for my wife would be greatly distressed by my absence. But I may come this way soon, and see you again." "O, I can not wait," cried the child of nature; "I may die before I see and learn how to please the Son. If you will not stay, let me go with you;—I will not make your wife afraid; I will stay among the trees. I am a brave man: I will do—I will suffer every thing that I may secure this everlasting, never-ending life and joy: I must go with you and hear more words." Thus earnestly pleaded this man of the wild forest, in a vein perfectly rational and consistent,—free from the unnatural biggotry and vitiated sentiment which invariably darkens the mind of those who have been accustomed to read or hear the glorious truth, but without a willing mind to act consistently with rational conviction. We need not pursue this subject farther, our object having been to illustrate the lamentable contrast between what professing christians, as rational beings, should be, and what they generally are, under the hardening influence of light without obedience.

An African Tribe.—Here we are, in the midst of burning plains and savage hordes. Now look at yon band of sable Christians. "This little Christian band," says Moffat, "had met on a Sabbath morning, with the people in the centre of the village, to hold the early prayer meeting before the services of the day. They were scarcely seated when a party of marauders approached from the interior, whither they had gone for plunder, and not having succeeded to their wishes, had determined to attack this Corrana village on their return. Mosheu arose, and begged the people to set still, and trust in Jehovah, while he went to meet the marauders. To his inquiry what they wanted, the appalling reply was, 'Your cattle; and it is at your peril you raise a weapon to resist.' 'There are my cattle,' replied the chief, and resumed his position at the prayer meeting. A hymn was sung, a chapter read, and then all kneeled in prayer to God, who only could save them in their distresses. The sight was too sacred and solemn to be gazed on by such a band of ruffians; they all withdrew from the spot without touching a single article belonging to the people."

Written Speeches or Sermons.—Sidney Smith says, on this subject, "What can be more ludicrous than an orator delivering *stale indignation* and fervor, of a week old, turning over whole pages of *excitement*, and so affected by a preconcerted line that he is unable to proceed any farther?" It is a manifest fact, that modern preaching is regarded in the same light as a theatrical declamation, in imitation of some other real or supposed character, and produces as little effect.

Effects of Vice.—It is stated that of the 400,000 births annually, in the United States, at least 20,000 children inherit from their parents, diseased constitutions. This should be a subject of reflection of the municipal authorities of large cities; the usual apathy or leniency with regard to immorality virtually establishes a curse on future generations.

A noble mind emulates merit, but low minds only envy it; the one seeks to rise by imituting merit, the other seeks by detraction to bring merit down to its own level.

A dark spot, equal in extent to the American continent, is now visible on the disc of the sun.

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Office on F street, opposite the Patent Office.

He has the honor of referring, by permission, to Hon. Edmund Burke, Commissioner of Patents; Hon. H. L. Ellsworth, late ditto: Judge Cranch, Washington, D.C.; Hon. R. Choate, Massachusetts, U. S. Senator; Capt. H. M. Shreve, Missouri; H Knowles, Machinist, Patent Office. april 2.

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Dec. 25.

Levi Chapman.

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MANUFACTURED by J. S. STAFFORD & CO., Cummington, Mass.—The unprecedented sale of the Cummington Quinebaug Seythe-stones, during two years, has fully established their claim to superiority over all other stones now in use, and renders unnecessary any recommendation from the proprietors.

☞ A continuance of public patronage is respectfully solicited. All orders addressed to J. S. Safford, or Jacob Morse, (sole proprietors,) or Stephen Morse, Agent, Cummington, Mass., will meet with prompt attention.

For sale at all the principal hardware stores. nov9

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THE cheapest office in this city for Dental operations is Dr. Brown's, 280 1-2 Broadway, between Reade and Chambers st.

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MANUFACTORY, 189 Broadway, N. Y. nov9.

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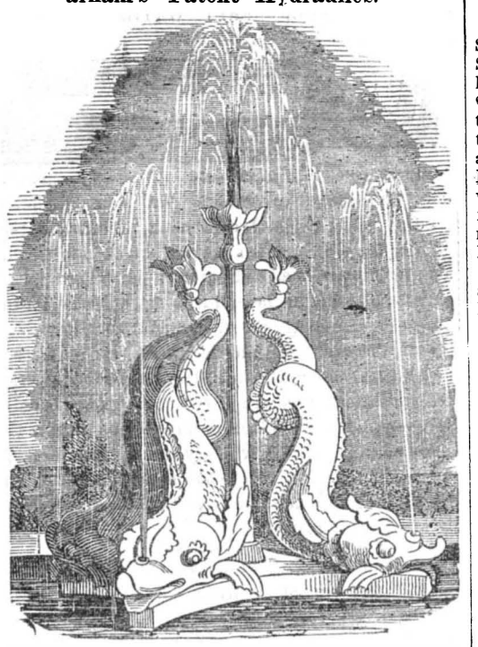
march 26. A. R. HAIGHT.

arnam's Patent Hydraulics.



D. L. FARNAM,
(29 FULTON STREET, N. Y.)

MANUFACTURES Cast Iron Fountains in great variety, at prices from Five to Five Thousand Dollars;—also Lift and Force Pumps, calculated to raise from ten to six thousand gallons per minute, and fitted for every variety of purpose for which they can be required. Fire Engines, of superior powers; Leather Hose, Wind Mills, Water Wheels, Horse Powers, Lead Pipe, Air Pumps, Brass Work, &c. &c.

D. L. F. has pulished a work on the subject of Hydraulic apparatus, Fountains, &c., which contains much useful and practical information, and among others 18 cuts of Fountains, with their prices;—the book can be forwarded by mail to those requiring information on the above subjects. nov9

Patent Agency

DRAWINGS and specifications of machines, with other papers requisite for procuring Patents of New Inventions, will be furnished at short notice, at the office of the Scientific American. No charge will be made for advice or instructions on the subject of securing Patents.

PROSCH'S
Daguerreotype Rooms,

EXPRESS BUILDING, 112 BROADWAY,
Nearly opposite the City Hotel, New York.

Likenesses obtained at this establishment in superior style, and inclosed in a handsome Case for One Dollar—Fifty Cents additional if colored and sealed.

Every Portrait shall give satisfaction or no sale.

N. B. Instruction given in the art, and the most improved apparatus, &c., furnished on as favorable terms as elsewhere. GEO. W. PROSCH. feb4

FREE EXHIBITION,
Persons are invited to call and see their own
PORTRAITS,

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Daguerrean Room, Southeast corner of Broadway and Fulton street,
(Entrance 156 Fulton,) New York.

Plain Portraits, including morocco case, $1 00; colored do. $1 50. feb1

The Nautilus.

The most complete, improved and perfect
LIFE PRESERVER

that has ever yet been used or known, is manufactured and for sale at No. 90 Nassau street. This instrument is so constructed as to be condensed into a small compass, and may ever be carried in the pocket; but when required for use, it instantly inflates itself, and may be adjusted round the body and secured in one fourth of a minute, and will effectually secure the wearer against the possibility of drowning. The price of the article is $3,50. jan 22.

Rolling Mills, blast Furnaces & Forges,

Iron works of all descriptions, erected upon the most improved plans; steam or water powers.

Drawings, plans and estimates made for buildings, furnaces and machinery, and contracts for the whole or any part thereof taken and executed with promptness and despatch; and will also give his personal superintendence in the erection of iron works of all kinds, such as Rolling mills, blast furnaces—of hot and cold blasts—anthricite, bituminous, and charcoal or wood furnaces, forges, triphammers; iron, brass, and bell foundry, pudling and heating furnaces, air cupolo chaffery and refinery, or let out furnaces.

N.B.—All letters directed, post-paid, to S. B. MERKEL, Founder-machinist, millwright, draughtsman and Engineer, Philadelphia. Pa. feb11.

JOHN BROWN.
CARPENTER AND PRINTER'S JOINER.
Nos. 29 & 61 Ann-street, N. Y.

MANUFACTURER of Cases, Stands, Furniture, &c. Stereotype Blocks, of various sizes.

Box-wood and mahogany, for Engravers, always on hand.
Stereotype plates blocked at short notice.
Press, paper, and letter boards, of every description.
Book-binders' cutting and pattern boards.
Stereotype boxes, made to order.
Printers', stereotypers, type-founders's, and bookbinders' jobbing work done at the shortest notice.

N. B. Orders from various sections of the country solicited, and promptly executed. nov9

The Best Ink Known,

Two Silver Medals Premium!

At the Annual Fair of the American and Mechanics' Institute for 1846, a SILVER MEDAL was awarded by each to Thaddeus Davids for "the Best writing Ink known." 500 gross 2, 4 6, 8, 16, and 32 oz. steel pen ink; 100 gross, ditto blue, red, japan, and copying ditto; 200 gross, Indelible Ink, warranted, with and without a preparation in elegant cases; 5000 lbs. wafers, all sizes and qualities from 10 to 50 lbs.; 10,000 lbs., sealing wax from 6cts. to $1, per lbs. For sale, wholesale and retail, on accommodating terms, by THADDEUS DAVIDS, Importer and manufacturer of sealing wax, wafers, inks, indelible inks, &c., No. 112 John street, New York, and by all stationers, booksellers, druggists, &c., in the United States. jny29

GURNEY'S PREMIUM DAGUERRIAN Gallery, 180 Broadway, New York.—Pictures taken at the establishment are not excelled in this country—so say his numerous patrons. The public are respectfully invited to call and judge for themselves.

W. H. BRIDGENS.
Engraver, Die Sinker,

AND STEEL LETTER CUTTER
No. 184 William, corner of Spruce st.

Name-Stamps for Blacksmiths, Stone Cutters, Carpenters and machinists, steel letters and figures of all sizes constantly on hand for marking iron, steel, brass and wood; Notary seals, desk seals, door plates made and engraved; artificial flower stamps, vainers and loofers made at the shortest notice and on most reasonable terms. feb11.

State Convention.

STATE OF NEW YORK, ss.—We, the Secretary of State, the Comptroller, and the Treasurer of the said State, having formed a Board of State Canvassers, and having, in conformity to the provisions of the act entitled "An act recommending a Convention of the People of the State," passed May 13, 1845, canvassed and estimated the whole number of votes or ballots given for and against the said proposed "Convention" at a General Election, held in the said State on the fourth day of November, in the year 1845, according to the certified statements of the said votes or ballots received by the Secretary of State in the manner directed by the said act, do hereby *determine, declare,* and *certify*, that the whole number of votes or ballots given under, and by virtue of the said act, was two hundred and forty-seven thousand, one hundred and seventeen; that of the said number, two hundred and thirteen thousand, two hundred and fifty-seven votes or ballots were given for the said Convention: That of the said first mentioned number, thirty-three thousand, eight hundred and sixty votes or ballots were given against the said Convention: And it appearing "by the said canvass that a majority of the votes or ballots given as aforesaid, are for a Convention," the said canvassers do farther *certify* and *declare*, that a Convention of the People of the said State will be called accordingly; and that an election for Delegatas to the said Convention will be held on the last Tuesday of April, in the year 1846, to meet in Convention at the Capitol in the City of Albany, on the first Monday in June, 1846, pursuant to the provisions of the aforesaid act of the Legislature.

Given under our hands, at the Secretary of State's Office, in the City of Albany, the twenty-sixth day of November in the year of our Lord one thousand eight hundred and forty-five.

N. S. BENTON, Secretary of State.
A. C. FLAGG, Comptroller.
BENJ. ENOS, Treasurer.

State of New York, Secretary's Office.—I certify the preceding to be a true copy of an original certificate of the Board of State Canvassers on file in this office.

Given under my hand and seal of office, at the City of Albany, the twenty-sixth day of November, in the year of our Lord one thousand eight hundred and forty-five.

N. S. BENTON, Secretary of State.

STATE OF NEW YORK, Secretary's Office, Albany, January 28th, 1846.

To the Sheriff of the County of New York—*Sir:*—Notice is hereby given, that pursuant to the provisions of the act entitled "An act recommending a Convention of the People of this State, passed May 13, 1845, an election will be held on the last Tuesday of April next, in the several cities and counties of this State, to choose Delegates to the Convention to be held pursuant to the provisions of the aforesaid act and the certificate above recited.

The number of Delegates to be chosen in the County of New York will be the same as the number of Members of Assembly from the said county.

Respectfully yours,
N. S. BENTON, Secretary of State.

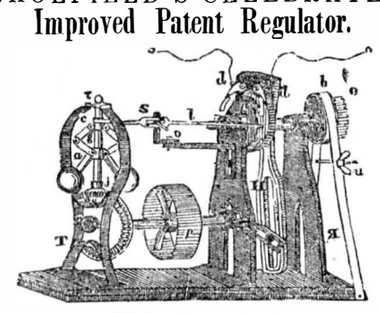
Sheriff's Office, New York, February 7, 1846.

The above is published pursuant to the notice of the Secretary of State, and the requirements of the statute in such case made and provided for. WM. JONES,
Sheriff of the City and County of New York.

☞ All the public newspapers in the county will publish the above once in each week until election, and then hand in their bills for advertising the same, so that they may be laid before the Board of Supervisors and passed for payment.

See Revised Statutes, vol. I, chap. vi., title 3d, article 3d—part 1st, page 140. march 18 t E.

SCHOLFIELD'S CELEBRATED
Improved Patent Regulator.



N. SCHOLFIELD, Norwich, Conn., continues to manufacture, and keeps constantly on hand, his Improved Patent Regulators, for water-wheels and steam engines; he makes five different sizes, indicated by numbers comencing at the largest size, which is called No. 1, &c..

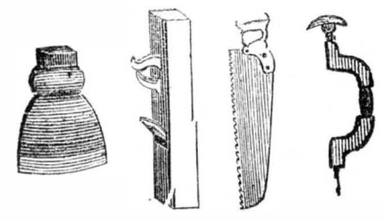
They are built in a neat and compact form, and printed directions accompany each machine, which will enable any mechanic to put them in operation; as a general rule the different numbers are adapted to different sized wheels, as follows;

For over-shot or breast wheels, 3 feet buckets, No. 5; 5 or 6 feet buckets, No. 4; 6 to 10 feet buckets, No. 3; 8 to 15 feet buckets, No. 2; 12 to 20 ft. buckets, No. 1; greater than 20 feet, No. 1 extra.

The following agencies have been established for the sale of these machines:—Jones, Denney & Ward, Boston; V. J. Bates & Co., Providence, R. I.; Charles Schenck, New York city; D. Wight & Son, Troy, N. Y.; R.M. Vansickler, Albany, N.Y.; S.C. Bemis, Springfield, Mass.; Denslow & Beach, Hartford, Conn.; Joseph B. Hughes, Philadelphia; Wells Chase, and Towner Dunlap & Co.; Baltimore.

N. Scholfield also builds to order Bacon's Improved Pickers, a superior article for cotton or wool.

Norwich Conn., Feb. 14. f15eowtf.



AT HENRY ROWNTREE'S old established *Tool Store*, at the Corner of Chambers and Chatham streets, Mechanics, Farmers, &c., will find an assortment of good Tools, suitable for almost every branch of trade.

H. R. feels obliged to his many customers, of every class, for their past patronage and hereby assures them that no pains shall be spared to procure the best articles in all variety.

H. R. has a greater part of his goods made expressly for him, and Mechanics, &c., may place confidence in them, having had the gold medal awarded him, at the late Fair, for the best tools.

First rate Razors; Pen and Pocket Knives; Table Knives and Forks, &c.

☞ Remember, at the corner of Chambers and Chatham streets. dec26

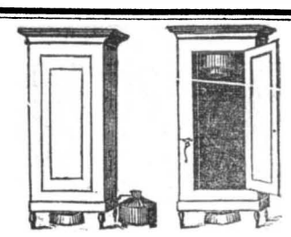
Book for Mechanics.

THE ENGINEER'S AND MECHANIC'S
COMPANION.

Comprising Weights, Measures, Mensuration of superfices and solids, tables of squares and cubes,—square and cube roots, circumference, and areas of circles, the mechanical powers, centres of gravity, gravitation of bodies; strength, weight, and crush of materials; waterwheels; hydrostatics, hydraulics, statics, centres of percussion and giration; friction, heat, tables of weight and metals; pipes, scantling, and interest; steam and the steam engine.

By J. M. SCRIBNER, A. M.

Recently published, and for sale by
HUNTINGTON & SAVAGE,
216 Pearl st., price $1,12 to $1,50.
jny1



Locke's Portable Shower Bath.

THE subscriber has the satisfaction to announce to the public, that he has perfected, and is prepared to furnish at short notice, a portable shower-bath, far superior in utility and convenience of management, to anything of the kind hitherto offered. It constitutes a light and genteel article of furniture for a bed-chamber, and so perfectly constructed, that either a lady or gentleman can at any moment enjoy a copious shower without the id of servants, and withodt having a drop of the water sprinkled on the carpet or floor. And by a slight change in a part of the apparatus, the same may be converted to a steam-bath, either plain or aromatic. These baths are manufactured and may be examined at No. 31 Ann st.
JOHN LOCKE.
Dec 4.

ILLUSTRATED BOTANY.

Edited by JOHN B. NEWMAN, M. D.

Circumstances make the man, and very often, as in the present case, the book. For years there has been a steadily increasing interest felt for the vegetable kingdom. Latterly this taste has been partially gratified by the literary magazines, which owe their popularity, in a greatmeasure to the beautiful flower prints that adorn them. One specimen a month, however, is not enough, nor is it required in such connection. A work relating exclusively to the subject, is wanted by the public, and this want, the present enterprise is intended to supply.

Preceded by a short introduction on Physiology, and a view of the Natural and Linnæan Systems, the work will be devoted to a separate consideration of each plant.—Together with our own information, we shall draw on the standard works on Chemistry, Botany, and Medicine, combining every useful item of knowledge, and without lessening its value, present it in a concise and pleasing form. Obtaining our supplies from the same sources as the bee, we hope to *secrete* as elegant a sweet for the mind, as it does for the body. The properties of each, more especially the medicinal, will be confirmed, in a great number of instances, by personal experience. To this will be added its history; its meaning in the language of flowers; and poetry, either original or selected from the gems of the children of song.

The whole illustrated by splendid colored engravings, taken from nature, full size, and finished in the highest style of modern art.

This work is designed to be eminently popular in its application, and there is enough of that which is stronger than fiction about it, to render it, in no ordinary degree, interesting and instructive.

Terms.—This work will be published monthly, with four or six flowers, handsomely painted, in each number. Price three dollars a year, or two copies sent to one address for five dollars. A *very* liberal discount allowed to agents.
J. K. WELLMAN,
Publisher and proprietor, 118 Nassau st.

*** Furnished to Seminaries, Colleges, and societies, in clubs, 10 copies for $20 a-year.

PARTICULAR NOTICE.

We do not intend to confine ourselves to the botanical descriptions of each plant, but on the contrary, divested of technicality, intend to make it a thoroughly scientific work, in all the departments of Botany. It will also give information on the cultivation of Plants and Flowers. In a word, it will comprise the whole science.

We give below the *free* opinions of the press.

From the N.Y. Tribune.

"ILLUSTRATED BOTANY."—This is a new candidate for popular favor, in the shape of a monthly periodical. The first two numbers are before us, and if they may be regarded as speeimens of those which are to follow, the work will certainly prove highly attractive. It is to be devoted to a separate consideration of each plant in the vegetable kingdom, the whole illustrated by colored engravings, taken from nature, full size, and finished in the highest style of modern art. Four or six of these engravings will be given in each number. Those in the numbers already issued are of the most beautiful and splendid description. The Editor will draw on the standard works on chemistry, botany, and medicine, and thus combine in a brief form every useful item of knowledge respecting plants and flowers, their medicinal qualities, &c. To this will be added their history and their meaning in the "language of flowers." To all lovers of the beautiful in Nature and Art, we commend this work as eminently worthy of patronage.

From the Christian Advocate and Journal, (Edited by T. E. Bond, M. D,)

The painted specimens are really exquisitely done; and the great marvel with us is, how the work can be afforded at the low price of three dollars per annum, or two copies to an address for five dollars. Engravings can be cheaply multiplied, but paintings must be executed separately, and without the aid of labor-saving machinery. It will give us real pleasure to announce the successive numbers of this beautiful periodical, as we have been led to think the study of Botany not only as an innocent recreation, but eminently promotive of piety.

From the N. Y. Surgical and Medical Reporter.

We have received the first number of "The Illustrated Botany." This periodical is got up in a very neat form, and displays taste and judgment in its Editor, who, being a well educated medical man, is prepared to make a work of this kind very interesting and useful to the general reader. The colored plates are unsurpassed in beauty and finish.

From the Protestant Churchman (N. Y.)

ILLUSTRATED BOTANY.—The design of this work is admirable. It is intended to comprise scientific descriptions of the most valuable native and exotic plants, with their history, medicinal properties, &c. &c.

N. B. Publishers of newspapers who give the above prospectus three insertions, shall receive the work one year. march 26.

J. CHAPMAN'S
Gentlemen's Furnishing Store,

No. 354 Pearl Street,
One door from Franklin Square, New York.

Stocks, Cravats, ready made linen, hosiery, gloves; and a variety of other articles, of the best quality, constantly on hand, and for sale at the lowest prices. jny 29

Lap-welded Boiler Flues.

PROSSER'S PATENT.

THESE Flues alone, are now used in their marine engine boilers, by the French and English governments, and also by companies and private individuals for marine, locomotive, and stationary boilers where rapid generation of steam, with economy of fuel, weight and stowage is an object of consideration.

They can be obtained only, of the Patentee, at No 6 Liberty street, New York. THOS. PROSSER,
Nov 19tf. Patentee.

GALVANIC APPARATUS.

DANIEL DAVIS, Jr., 428 Washington street, Boston, manufactures all the variety of philosophical apparatus, connected with Magnetism, Galvanism, Electro-magnetism, and Magneto Electricity. He has constantly on hand a variety of Electro-magnetic machines, permanent magnets, Galvanic Batteries, &c. For sale on the most liberal terms. nov18

ELEGANT DAGUERRIAN
Portraits,

Furnished in neat morocco cases for
ONE DOLLAR,
By H. E. INSLEY, 122 and 124 Broadway.

ALEX. MACDONALD: PRINTER.

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